1. (Amended) A method of controlling an electromagnetic parts feeder which comprises a vibrating unit provided with an electromagnet of which a magnetic field vibrates at a predetermined frequency, a driving circuit for driving said electromagnet, and a control unit for outputting a driving signal to said driving circuit to cause a predetermined driving, comprising the steps of:

idling the driving of said electromagnet temporarily at a predetermined driving cycle of said electromagnet; and

controlling vibration of said vibrating unit based on a signal obtained from a coil of said electromagnet by its electromagnetic induction during a period of said idling,

wherein said vibration of said electromagnet is controlled based on a phase difference between a waveform of said signal obtained from said electromagnet by its electromagnetic induction during said idling period and the driving signal of said driving circuit.

3. (Amended) The method set forth in claim 1, wherein said controlling is performed by previously measuring a resonance frequency of said electromagnetic parts feeder, driving said electromagnet at said resonance frequency by said driving circuit, temporarily idling the driving by said driving circuit at said predetermined driving cycle, storing said phase difference between the waveform of said signal obtained from said electromagnet by its electromagnetic induction during said idling period and the driving signal of said driving circuit and said resonance frequency in a storage element, and driving said vibrating unit at the stored resonance frequency when it is driven.

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